

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/526,411  
Source: PCT  
Date Processed by STIC: 3-11-05

# ***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 03/11/2005

PATENT APPLICATION: US/10/526,411

TIME: 08:00:41

Input Set : A:\Final sequence list-13173-00009-US.txt

Output Set: N:\CRF4\03112005\J526411.raw

in

3 <110> APPLICANT: Klebsattel, Martin  
 4 Keetman, Ulrich  
 5 Herbers, Karin  
 6 Flachmann, Ralf  
 7 Sauer, Matt  
 8 Hillebrand, Heike

10 <120> TITLE OF INVENTION: Transgenic expression cassettes for expressing nucleic acids

11 nonreproductive floral tissues of plants

13 <130> FILE REFERENCE: 13173-00009-US

C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/526,411

C--> 15 <141> CURRENT FILING DATE: 2005-03-02

15 <150> PRIOR APPLICATION NUMBER: PCT/EP 2003/009594

16 <151> PRIOR FILING DATE: 2003-08-29

18 <150> PRIOR APPLICATION NUMBER: DE 102 41 124.7

19 <151> PRIOR FILING DATE: 2002-09-03

21 <160> NUMBER OF SEQ ID NOS: 36

23 <170> SOFTWARE: PatentIn version 3.3

25 <210> SEQ ID NO: 1

26 <211> LENGTH: 2039

27 <212> TYPE: DNA

28 <213> ORGANISM: Arabidopsis thaliana

30 <220> FEATURE:

31 <221> NAME/KEY: promoter

32 <222> LOCATION: (1)..(2039)

33 <223> OTHER INFORMATION: 76L promoter (including 5'-untranslated region) of

34 gene locus At3g01980

37 <400> SEQUENCE: 1

38 tatcctctgc gcaatgaatt caacaaacgt tttacacaaa gaaaaaaacc tgttgaaaat 60  
 39 gaaagaaaaa aagtgatgaa atacattaga aaccttttgg atatagtcaa ggacttgagt 120  
 40 gtctctgatc ttattgccat cttggtcgat gactttgaaa acgtccatga accaacctcc 180  
 41 atcggaagag atgtaagctt tcttgatcac aagattcata tcagtgaagca cttgtactac 240  
 42 ttccaataga gtcccatgtt tgttcacact atcaaccttt tatttagcac cacaaacaaa 300  
 43 cagggaactc tgttttctca aaatctcttt gtttggtaca gaaccacttg aacaatttga 360  
 44 agagacagat ttatttacct gaataacagt ggcatcgctg cttgcgttgt tgtctattac 420  
 45 aactctgtat ccaccatgaa acatacataa ataaagatga atgttttagc agctggaatc 480  
 46 tttacaaggg tatagaggct cacaaacgga gcatggagaa acagaggacc tagaaaacaa 540  
 47 taaaagagta tggagagaaa gagaaaaaac tgggaggatt cattctcctg atgagcttgg 600  
 48 catattcatc atcatccatg gttgtagtat gtatctcctt ggtgatttgg ctgcagcaga 660  
 49 aacccagaag agtgtgagtc ctccaatttc tgaggaaaat tcctaaaaga gagagggaga 720  
 50 gggaagttag agaggagataa aaatggtagg ccaccggaac cgaaccttgt tttcattagt 780  
 51 tgatcgagca cgtgccacta aagattctta gagatgacgt ggcacgggca cagcaacttt 840  
 52 tagattctgt tataattgtt cgaatactac caaaagtcgg gtgaagattt ggggtcaatt 900  
 53 tgatgatcat aaaggggatt atattctcct tctcaagcaa gatgtggtat ttactagtat 960

(pg. 6)

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54 aatagatcat tcgttatctt gaggtagacc tctccgtaac gttcacaggt gcatgaccaa 1020
55 gtaacaattt gattcctttc cagcataacg tcatgttggt tgcaaaaaga aggcaaaagta 1080
56 gagcaagcaa gcaagcaaag catTTTTtctt attttatatt ttgttgcgga ttccaccacc 1140
57 cacttgaaaa attgacatgt cacaatgatt tcgtatccta gtcttttatt atttaacact 1200
58 ctcaaatcc cattactcta cacctctttc attaagtcaa cacacggttt tcaaaaatcc 1260
59 actacctcc caccacctag aatcttttgt tacctaccaa caccctcctt tgttctcttt 1320
60 atatattggt ccaactaaat caataaggga aagcatcctt ttggttggag gaattgcttt 1380
61 cattctcact ctttgtgtgt tgatcaatgg actagctaata aacaagttcc tcctctatat 1440
62 atttcaaaag aatggaacag aaacataaac gaaagacaga gtacctgatg ttgatgattc 1500
63 attgtctgtc tggagctccc aaatgccttt tatgcttaca tattcataac caacaacggc 1560
64 tattaattat aaacaaaaa cacgaaataa gtttgtagca aagtgaattt aggaatcttg 1620
65 gagatggatc cattaatagt aggataatag gatattgatg aatttgggtg gggaacagtg 1680
66 ataacttacg cttgcttccg gcgcccggaa agttggaaaa cctacaaaagt acagaaatgg 1740
67 atctgggcct tgaagtgggc tttttattaa agaaaaaat acatctccgt tatcaatcac 1800
68 catcttcttc tatctacaaa ttaaagaagg taacaacaga acgtggtgga tcatgtggtt 1860
69 aggcattaat tatttgcttt gtttcgccgt tttggttaaca cacagacaca gttccggtaa 1920
70 gagcttttgc agccactctt tatagttatt tagaattggc gatcgaatca atctcactcc 1980
71 ctccctccct taagtcttgt tgaatctgct gaattgtttt ataaagagtt actttggca 2039
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75 <211> LENGTH: 2180
76 <212> TYPE: DNA
77 <213> ORGANISM: Arabidopsis thaliana
79 <220> FEATURE:
80 <221> NAME/KEY: promoter
81 <222> LOCATION: (1)..(2180)
82 <223> OTHER INFORMATION: 84L promoter (including 5'-untranslated region) of
83 gene locus At1g63140
85 <400> SEQUENCE: 2
86 catgtttcag aggatatgtt cacaacaatt ccaaaagcag atgccatctt catgaaagta 60
87 aactcatata tttttcattc atggaaaagt ttaatcaata acaaaatacta tcttcatttc 120
88 ataaaagcct tgtttcagat tttttcacac acatttaaaa gtgttttaag tttatcttat 180
89 acctttaagt acatttatga tttttttttt ctctatttaa ataagctgaa agattataga 240
90 taaatggttt tgttttatta aaaatgatgc attgaaaata taaaaggaca ttttatatat 300
91 agatactaca tgattaggcc gatggaacca aagatgagcg actcttcttg taacattgtg 360
92 tttgctacgc aatgctcgtt tttttttttc ttagatcgag actttgcctg agattctggt 420
93 tttcttcgat tgtgaaatca tatatgtctt gccttctcat ataggttcaa cattgaccaa 480
94 caaaaactac ggtggtttta gttttttttg ggtggagagt ggagactaac cttgaccttt 540
95 ttcatttgta atgatttttc tttcttgtat gaactattgt ttgtttattg gcgctgttca 600
96 tttgttccga gtgttttcgt atatgcttta aacaagcacg tactatcagc aatagcaaaa 660
97 gtaacatgat atttggtaat cccgttggaa attcatgtcc attattttgt atatatatat 720
98 attatataat agtagaattt ggttatgtag tgcataattct ctaaattctat gctttctaag 780
99 gttaaaaaca ggcgcccata tggacgacat aaatgtcgat atttaagagg cactgcaagt 840
100 tgaacaaaaa aaaaaaagt taggcactgc aaaagttatc caacgtattt aagactaagg 900
101 actaaagatt caaagataat attcagaaaa agaaaaagaa aaaaagagaa gataatattc 960
102 ggaacatcc acaagcattc taaatctaga aaacataaat aatacagcaa agatggggat 1020
103 gaagatatga tccaactcca tcacagattc tcaagacaga tttagaaaagt gtcaagctca 1080
104 ccaaaaagggt tataggagac tgactgttaa ttgaaatgct ttctacacgt ggacgcactg 1140
105 atatcatatt aaaacctgat tgtttgttga acattcacta actcatacca aacggtccaa 1200
106 acctatgtct ccattttctt aaatgttgat ttcgattcca tacctacttt gcatacatta 1260

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107 ttgaatgtgt ttcttaagtt gtgattaaaa ttaaatgagc acaatatcac agtcgaatgg 1320
108 tatatcgatg taacacttta ggattgaatc aatatgaaaa gttatacacc gaatttgtga 1380
109 gaaacgagta tagcttagac aaaatttggt tttcttaaat taagcggaaa aataattaaa 1440
110 cagagaccaa attaagcggt cttcttgaac tgaaatcact aaagtaaaagt taacccggtta 1500
111 gtagagtgtt aactatttta acaaagaaaa ctccaaaccc aattgagaaa ctactcaaac 1560
112 atagaaacaa cacataatga ttcagtagct accaatatca tattcaactt tgtttcgatt 1620
113 cctttaaaac aaaatataat taaccaaata aaatagggtca taatcgattc agaaacaatt 1680
114 tcatattctt ctctagttta gttcagtttc attctaccgg agttgtatac aatctataat 1740
115 tttatcgctt attaccttaa aagcgtcctc aaaccaacca aaacaaaaat agttgcatca 1800
116 atgaatccat caaagcatat aaattcacac cgtcttaaaa tggagtgttg atggataagt 1860
117 accaacaatt ttagaccatt cacactgaat gagtatgact aacattcaca ttcacattca 1920
118 attaggaaag ttgtactaat gaacacacaa taaaagtga aacaaatctc tacatattct 1980
119 tgtacaccaa tctatattag atgatcattt taaatataca cgaatattaa ttttataaat 2040
120 gaaaaatacy tgcccatatt ttaattaatt tatatattta gctatcaa attaggcata 2100
121 atgttggtga ggtttctgag tataaaaaat gacaaagtat gaataccatc tataccttta 2160
122 ttacctatct ttctcgattt 2180
125 <210> SEQ ID NO: 3
126 <211> LENGTH: 1033
127 <212> TYPE: DNA
128 <213> ORGANISM: Arabidopsis thaliana
130 <220> FEATURE:
131 <221> NAME/KEY: promoter
132 <222> LOCATION: (1)..(1033)
133 <223> OTHER INFORMATION: 76S promoter (including 5'-untranslated region) of
134 gene locus At3g01980
136 <400> SEQUENCE: 3
137 aggtgcatga ccaagtaaca atttgattcc tttccagcat aacgtcatgt tggttgcaaa 60
138 aagaaggcaa agtagagcaa gcaagcaagc aaagcatttt tcttatttta tattttgttg 120
139 cggattccac caccacttg aaaaattgac atgtcacaaat gatttcgtat cctagtcttt 180
140 tattatttaa cactctcaca atcccattac tctacacctc tttcattaag tcaacacacg 240
141 gttttcaaaa atccactacc ctcccaccac ctagaatctt ttgttaccta ccaacaccct 300
142 cctttgttct ctttatatat tgggtccaact aaatcaataa gggaaagcat ccttttggtt 360
143 ggaggaattg ctttcattct cactctttgt gtgttgatca atggactagc taataacaag 420
144 ttcctcctct atatatattca aaagaatgga acagaaacat aaacgaaaga cagagtacct 480
145 gatgttgatg attcattgtc tgtctggagc tcccaaatgc cttttatgct tacatattca 540
146 taaccaacaa cggctattaa ttataaacca aaaacacgaa ataagtttgt agcaaagtga 600
147 aattaggaat cttggagatg gatccattag tagtaggata ataggatatg atggaatttg 660
148 gttggggaac agtgataact tacgcttgct tccggcgccg ggaaagttgg aaaacctaca 720
149 aagtacagaa atggatctgg gccttgaagt gggcttttta ttaaagaaaa aaatacatct 780
150 ccgttatcaa tcaccatctt cttctatcta caaattaaaag aaggtaacaa cagaacgtgg 840
151 tggatcatgt ggtaggcat taattatttg ctttgtttcg ccgttttggt aacacacaga 900
152 cacagtccg gtaagagctt ttgcagccac tctttatagt tatttagaat tggcgatcga 960
153 atcaatctca ctccctccct cccttaagtc ttgttgaatc tgctgaattg ttttataaa 1020
154 agttactttg gca 1033
157 <210> SEQ ID NO: 4
158 <211> LENGTH: 1097
159 <212> TYPE: DNA
160 <213> ORGANISM: Arabidopsis thaliana
162 <220> FEATURE:

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163 <221> NAME/KEY: promoter
164 <222> LOCATION: (1)..(1097)
165 <223> OTHER INFORMATION: 84S promoter (including 5'-untranslated region) of
166     gene locus At1g63140
168 <400> SEQUENCE: 4
169 aaagggttat aggagactga ctgttaattg aaatgctttc tacacgtgga cgcaactgata 60
170 tcatattaaa acctgattgt ttgttgaaaca ttcactaaact cataccaaac ggtccaaacc 120
171 tatgtctcca ttttcttaaa tggtgatttc gattccatac ctactttgca tacattattg 180
172 aatgtgtttc ttaagttgtg attaaaaatta aatgagcaca atatcacagt cgaatggtat 240
173 atcgatgtaa cactttagga ttgaatcaat atgaaaagt atacaccgaa tttgtgagaa 300
174 acgagtatag cttagacaaa atttgttttt cttaaattaa gcggaaaaat aattaaacag 360
175 agaccaaatt aagcgttctt cttgaactga aatcactaaa gtaaaagttaa cccgttagta 420
176 gagtgttaac tatttaaaca aagaaaactc caaacccaat tgagaaacta ctcaaacata 480
177 gaaacaacac ataatgattc agtagctacc aatatcatat tcaactttgt ttcgattcct 540
178 ttaaaacaaa atataattaa ccaaataaaa taggtcataa tcgattcaga aacaatttca 600
179 tattcttctc tagtttagtt cagtttcatt ctaccggagt tgtatacaat ctataatttt 660
180 atcgcttatt accttaaaaag cgtcctcaaa ccaacccaaa caaaaatagt tgcattcaatg 720
181 aatccatcaa agcatataaa ttcacaccgt cttaaaatgg agtgttgatg gataagtacc 780
182 aacaatttta gaccattcac actgaatgag tatgactaac attcacattc acattcaatt 840
183 aggaaagtgt tactaatgaa cacacaataa aagtgaaaac aaatctctac atattcttgt 900
184 acaccaatct atattagatg atcattttta atatacacga atattaattt tataaatgaa 960
185 aaatacgtgc ccatatttta attaatattat atatttagct atcaaatatt aggcataatg 1020
186 ttggtgaggt ttctgagtat aaaaaatgac aaagtatgaa taccatctat acctttatta 1080
187 cctatctttc tcgattt                                     1097
190 <210> SEQ ID NO: 5
191 <211> LENGTH: 19
192 <212> TYPE: DNA
193 <213> ORGANISM: Artificial sequence
195 <220> FEATURE:
196 <223> OTHER INFORMATION: Description of the artificial sequence:
197     Oligonucleotide primer
199 <400> SEQUENCE: 5
200 gaccctgtcc cacctccaa                                     19
203 <210> SEQ ID NO: 6
204 <211> LENGTH: 21
205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial sequence
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Description of the artificial sequence:
210     Oligonucleotide primer
212 <400> SEQUENCE: 6
213 tgagaactgc gattgtttgc a                                     21
216 <210> SEQ ID NO: 7
217 <211> LENGTH: 25
218 <212> TYPE: DNA
219 <213> ORGANISM: Artificial sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Description of the artificial sequence:
223     Oligonucleotide primer

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225 <400> SEQUENCE: 7
226 gtcgactatc ctctgcgcaa tgaat 25
229 <210> SEQ ID NO: 8
230 <211> LENGTH: 25
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: Description of the artificial sequence:
236 Oligonucleotide primer
238 <400> SEQUENCE: 8
239 cccgggaaat cgagaaagat aggta 25
242 <210> SEQ ID NO: 9
243 <211> LENGTH: 25
244 <212> TYPE: DNA
245 <213> ORGANISM: Artificial sequence
247 <220> FEATURE:
248 <223> OTHER INFORMATION: Description of the artificial sequence:
249 Oligonucleotide primer
251 <400> SEQUENCE: 9
252 gtcgacaaaag ggttatagga gactg 25
255 <210> SEQ ID NO: 10
256 <211> LENGTH: 25
257 <212> TYPE: DNA
258 <213> ORGANISM: Artificial sequence
260 <220> FEATURE:
261 <223> OTHER INFORMATION: Description of the artificial sequence:
262 Oligonucleotide primer
264 <400> SEQUENCE: 10
265 gtcgaccatg tttcagagga tatgt 25
268 <210> SEQ ID NO: 11
269 <211> LENGTH: 1187
270 <212> TYPE: DNA
271 <213> ORGANISM: Arabidopsis thaliana
273 <220> FEATURE:
274 <221> NAME/KEY: CDS
275 <222> LOCATION: (132)..(764)
276 <223> OTHER INFORMATION: coding for gene product of Arabidopsis thaliana
277 gene locus At3g01980
279 <400> SEQUENCE: 11
280 gttccggttaa gagcttttgc agccactctt tatagttatt tagaattggc gatcgaatca 60
281 atctcactcc ctccctccct taagtcttgt tgaatctgct gaattgtttt ataaagagtt 120
282 actttggcaa a atg gaa aat ccg gcg aag aga gtg ttg atg aca tcc aac 170
283 Met Glu Asn Pro Ala Lys Arg Val Leu Met Thr Ser Asn
284 1 5 10
285 ggc gac gag gtg tcc cga aac atc gct ttc cat cta gcc aaa cac ggt 218
286 Gly Asp Glu Val Ser Arg Asn Ile Ala Phe His Leu Ala Lys His Gly
287 15 20 25
288 tgc aag ttg gta atg atg gga aat gag ggt tcc cta agg agc att gta 266
289 Cys Lys Leu Val Met Met Gly Asn Glu Gly Ser Leu Arg Ser Ile Val

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/526,411

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Input Set : A:\Final sequence list-13173-00009-US.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:25; Xaa Pos. 5,10,13  
Seq#:26; Xaa Pos. 6,11  
Seq#:27; Xaa Pos. 9,12  
Seq#:28; Xaa Pos. 7  
Seq#:29; Xaa Pos. 5,7,13,14  
Seq#:30; Xaa Pos. 5,9  
Seq#:31; Xaa Pos. 3  
Seq#:32; Xaa Pos. 9

**VERIFICATION SUMMARY**

DATE: 03/11/2005

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Input Set : A:\Final sequence list-13173-00009-US.txt

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L:15 M:270 C: Current Application Number differs, Replaced Current Application No  
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:829 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
L:848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:868 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
L:888 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
L:907 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:926 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0  
L:950 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0  
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0